

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
18 January 2001 (18.01.2001)

PCT

(10) International Publication Number
WO 01/04309 A1

(51) International Patent Classification⁷: C12N 15/12,
C07K 14/47, A61K 38/17, C12Q 1/68, G01N 33/50,
C07K 16/18

(US) **WOLFGANG, Curt** [US/US]; 11479 Stony Point
Pl., Germantown, MD 20876 (US).

(21) International Application Number: PCT/US00/19039

(74) Agents: **HYMAN, Laurence, J. et al.**; Townsend and
Townsend and Crew LLP, 8th Floor, Two Embarcadero
Center, San Francisco, CA 94111-3834 (US).

(22) International Filing Date: 12 July 2000 (12.07.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data: 13 June 2000 / 30 May 1999
60/143,560 13 July 1999 (13.07.1999) US
60/157,471 1 October 1999 (01.10.1999) US

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ,
DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,
HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,
NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM,
TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian
patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European
patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE,
IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG,
CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (*for all designated States except US*): **THE
GOVERNMENT OF THE UNITED STATES OF
AMERICA**, as represented by **THE SECRETARY OF
THE DEPARTMENT OF HEALTH AND HUMAN
SERVICES** [US/US]; Bethesda, MD 20892 (US).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **PASTAN, Ira**
[US/US]; 11710 Beall Mountain Road, Potomac, MD
20854 (US). **ESSAND, Magnus** [SE/US]; Apartment 629,
3133 Connecticut Avenue, N.W., Washington, DC 20008
(US). **LEE, Byungkook** [US/US]; 10711 Sandy Landing
Road, Potomac, MD 20854 (US). **VASMATZIS, George**
[GR/US]; 2819 4th Avenue, N.W., Rochester, MN 55901

Published:

- With international search report.
- Before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments.

*For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.*

(54) Title: T-CELL RECEPTOR γ ALTERNATE READING FRAME PROTEIN, (TARP) AND USES THEREOF

(57) Abstract: This invention provides nucleic acids containing sequences from a TCR γ transcript from prostate epithelial cells and many breast cancer cells and a T-cell receptor gamma Alternate Reading frame Protein ("TARP") expressed from the translation of those sequences. Vaccines made from TARP are useful in raising immune responses to cells in which the protein is expressed, including prostate cancer cells and cells of many breast cancers. The invention also provides methods for diagnosing the presence of prostate cancer and TARP-expressing breast cancers, as well as methods of administering TARP and nucleic acids encoding TARP to subjects.

WO 01/04309 A1